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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,050	03/02/2004	Richard Lang	LANG3003/JEK	9821

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EXAMINER	
SEVER, ANDREW T	
ART UNIT	**PAPER NUMBER**
2851	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/790,050	LANG, RICHARD	
	Examiner	Art Unit	
	Andrew T. Sever	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al. (US 6,183,090.)

Nakanishi teaches in figure 4B a projection device, wherein light emitted from at least one light source (1) is split into different colors and subsequently is transmitted to respective light valves (5-R, 5-G, and 5-B), said projection device comprising several optical components including a plurality of light splitting elements (4-C, 4-G), wherein said optical components are arranged such that each of said light splitting elements is located at a location in which the light of said at least one light source is still in a quasi-parallel or parallel state (there are no polarizing or lenses between the light source and the two splitters.)

With regards to applicant's claim 10:

See above, wherein parts 8 are polarizers.

With regards to applicant's claim 12:

See above, wherein the method of using the projection device of Nakanishi is inherent (see MPEP 2112.02. At least the second and third steps are performed.

With regards to applicant's claim 13:

The splitters are positioned prior to any other optical element that would integrate or focus the beam emitted by the light source.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al. as applied to claim 1 above, and further in view of Ueda et al. (US 5,852,479.)

As described in more detail above, Nakanishi teaches a projection device which among other things includes optical components with a plurality of light splitting elements arranged at a location in which the light so the light source is still in a quasi-parallel or parallel state. Nakanishi, however does not teach a light integrator component located in a light path downstream of the light splitting elements. Such elements are taught by Ueda et al. in figure 5 and the accompanying text in column 5 liens 7-48 (part 272 is a fly-eye

lens array (microlenses). Ueda teaches in column 1 line 49 through column 2 line 10 that it is necessary to provide fly-eye lens array (microlenses) prior to an LCD if one is desiring to obtain an effective aperture ratio at a higher resolution. Accordingly it would have been obvious to one of ordinary skill in the art a the time the invention was made to provide a fly-eye lens array prior to the display but after the light splitting elements in the projection device of Nakanishi, as they allow for higher resolution imagining device with good effective aperture ratios as taught by Ueda.

With regards to applicant's claim 3:

Since both Nakanishi and Ueda teach 3 color paths and since the integrator (microlenses) are position after the splitter, it would be obvious to place them after the splitters in the projection device of Nakanishi in view of Ueda.

With regards to applicant's claim 4:

See above with respect to applicant's claim 2.

With regards to applicant's claim 5:

Ueda teaches in column 6 lines 54-64 that LCD's require polarization in order to work. Nakanishi teaches in figure 7 that the LCD panel of Nakanishi includes a polarizer (3) and polarization filter (9) at a disposition that would be after the microlens array that has been shown to be an obvious addition to the projection device of Nakanishi as taught by Ueda. Accordingly since Ueda suggests that a polarizer is necessary and Nakanishi

teaches one, it would have been obvious to construct the display in the manner taught by Nakanishi in view of Ueda.

With regards to applicant's claim 6:

Projection lens 6 is a type of imaging lens and it is downstream of the integrator.

With regards to applicant's claims 7-9:

All the splitting elements are located prior to any other optical components except the light source. This includes integrator components, polarizers or any sort of lenses.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi in view of Mi et al. (Us 6,909,473 as cited in the previous office action).

Nakanishi teaches in figure 4b a projection device, wherein light emitted from at least one light source (1), is split by a plurality of light splitting elements (4-C and 4-G) into primary colors, and subsequently is transmitted to respective light valves (5-R, 5-G, and 5-B), wherein these light valves create colored images which by means of polarizing beam splitters (3) are directed to a color composition element (10), wherein said light splitting elements are located in a location in which the light of said at least one light source is still in a quasi-parallel or a parallel state.

Nakanishi does not teach that the polarizing beam splitters comprise wire-grid polarizers. Mi et al. Teaches in column 3 line 46 through column 4 line 65 that wire-grid polarizers

have advantages over other prior art polarizers such as high extinction ratios and high efficiency (see column 4 liens 7-19). Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the wire-grid polarizer of Mi in the projection device of Nakanishi as they have better performance then other prior art polarizers.

Response to Arguments

6. Applicant's arguments with respect to claims1-13 have been considered but are moot in view of the new ground(s) of rejection.

Due to applicant's extensive revisions new art has been introduced that better meets applicant's claimed invention.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

William Perkey
Primary Examiner